

Serial No.: 09/511,776

Amendments to the Claims:

The following Listing of the Claims will replace all prior versions and all prior listings of the claims in the present application:

Listing of The Claims:

1. (Allowed) A method for determining the conformational state of a protein, comprising the steps of:
 - a) contacting a protein with a labeled first binding partner which binds to said protein in a manner dependent on the conformational state of said protein and which generates a signal in a manner dependent on the binding of the first binding partner to the protein, and a labeled second binding partner which binds to said protein in a manner independent of the conformational state of said protein and which generates a signal in a manner dependent on the binding of the first binding partner to the protein, wherein said protein and said labeled first and second binding partner are not covalently bound; and
 - b) detecting said protein by the binding of at least one of said labeled first binding partner or said labeled second binding partner to said protein wherein detection of a signal generated by said labeled first binding partner and/or said labeled second binding partner is an indicator of the conformational state of said protein.
2. (Allowed) A method for measuring the post-translational modifying activity of an enzyme, wherein the conformation of a protein is dependent upon the post-translational modification activity of the enzyme, the method comprising the steps of:
 - a) contacting a protein comprising a site for post-translational modification with the enzyme;
 - b) providing a labeled first binding partner which binds non-covalently to the protein in a manner dependent on the post-translational modification of the protein by the enzyme and which generates a signal in a manner dependent on said post-translational modification, and a second labeled binding

Serial No.: 09/511,776

- partner which binds non-covalently to said protein and which generates a signal in a manner dependent on said post-translational modification;
- c) contacting the protein with the labeled first binding partner and the labeled second binding partner and detecting said protein by the binding to said protein of at least one of said labeled first binding partner and said labeled second binding partner, wherein detection of a signal generated by said labeled second binding partner and/or said labeled second binding partner indicates the post-translational modifying activity of the enzyme.
3. (Previously Cancelled)
4. (Allowed) The method of claim 1 or 2, wherein the protein is immobilized on a solid phase substrate.
5. (Allowed) The method of claim 1 or 2, wherein the second binding partner is a capture ligand, and said protein that binds to said capture ligand is isolated from a protein that does not bind to said capture ligand.
6. (Allowed) The method of claim 5, wherein said capture ligand is bound to a solid phase substrate.
7. (Allowed) The method of claim 1 or claim 2, wherein at least one of said first or second binding partner is labeled with a label selected from the group consisting of a fluorescent label, a chemiluminescent label, a domain of an enzyme, a radiolabel, a chemical or enzymatic label and a heavy metal label.
8. (Allowed) The method of claim 1 or claim 2, wherein said first binding partner is labeled with a label detectable in a manner dependent on the binding of said first binding partner to the protein.
9. (Previously Cancelled)
10. (Allowed) The method of claim 1 or 2, wherein both said first and second binding partners are fluorescently labeled, and the binding of said binding partners to the protein is assayed by fluorescence resonance energy transfer (FRET).

Serial No.: 09/511,776

11. (Allowed) The method of claim 8, wherein both said first and second binding partners are labeled, with enzyme domains, which associate to form a functional receptor molecule when both binding partners are bound to the protein.
12. (Allowed) The method of claim 4, wherein said protein is covalently linked to the solid phase substrate.
13. (Allowed) The method of claim 1 or 2, further comprising the additional step of, after step (a), removing unbound labeled first binding partner to allow detection of the binding of the labeled first binding partner to the protein.
14. (Allowed) The method of claim 8, wherein the labeling of the protein by the binding of said first binding partner is detected by fluorescence correlation spectroscopy (FCS).
15. (Cancelled herein)
16. (Cancelled herein)
17. (Cancelled herein)
18. (Cancelled herein)
19. (Cancelled herein)
20. (Cancelled herein)
21. (Previously Cancelled).
22. (Previously Cancelled)